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REMARKS

In the Office Action dated December 14, 2005, claims 1-26 are pending. Independent claim 10 stands allowed. Claims 1, 11, and 18 are independent claims from which claims 2-9, 12-17, and 19-26 depend respectively therefrom. Claims 1, 11-12, and 18-24 are here in amended for informality and/or clarification reasons. Claims 1, 11-12, and 18-24 are not herein amended for patentability reasons. Applicant recognizes the allowability of claims 3-7 if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. However, Applicant submits that since claim 1, as originally drafted and especially as amended herein, is in a condition for allowance that claims 3-7 are allowable as originally drafted.

The Office Action states that claims 12 and 19-26 stand objected to for informality reasons. Specifically, claim 12 is objected to for lack of proper antecedent basis for the limitation of "said at least one scan line." Claim 12 is herein amended such that "said at least one scan line" is now "said at least one split scan line." Claim 20 is objected to because as originally drafted it depends upon itself. Claim 20 is herein amended to depend from claim 18. Note that claims 19 and 21-24 are also herein amended to depend from claim 18.

Claims 1-2 and 8-21 stand rejected under 35 U.S.C. 102(b) as being anticipated by Petrick et al. (U.S. Pat. No. 6,404,852 B1).

Claims 1, 11, and 18 have similar limitations and are therefore described together. Claims 1 and 11, respectively, recite an x-ray detector and an x-ray system. Claim 18 recites a method of operating an x-ray detector. The x-ray detector of claim 1 includes pixels that receive x-rays. One or more split scan lines activate the pixels. Each of the split scan lines has separated activation lines. A data line conducts charge indicative of the x-rays. Claim 11 includes all of the limitations of claim 1, however, rather than requiring that each split scan line have multiple separation lines, claim 11 requires that each split scan line have an associated first pixel scan set and a second pixel

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scan set. Claim 18 is also similar to claim 1, however, it requires that each of the split scan lines have separated activation lines, which are associated with a row of the pixels.

The Office Action states that Petrick discloses an x-ray detector that includes one split scan line and refers to item 46 of Petrick. Applicant submits that each of the select lines 46 of Petrick are not split scan lines. An example definition of a split scan line is provided in paragraph [0042] of the present application. In paragraph [0042], it is stated that scan lines are considered split when they are coupled to half the number of pixels along any given row of pixels. A split scan line may also refer to the use of multiple scan lines or activation lines for a single row of pixels, as shown in Figures 2-3 of the present application. Each of the select lines 46 is continuous across a single row of detector elements 40. For each row of detector elements 40 there is only a single select line associated therewith and that select line is considered as a single activation line. This is evident in view of Figure 3 of Petrick. Also, in col. 4, lines 44-45, Petrick states that the gate electrodes of the transistors 44 in each row are connected to a common row select line 46.

In order for a reference to anticipate a claim the reference must teach or suggest each and every element of that claim, see MPEP 2131 and *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628. Thus, since Petrick fails to teach or suggest each and every element of claims 1, 11, and 18, claims 1, 11, and 18 are novel, nonobvious, and are in a condition for allowance. Also, since claims 2-9, 12-17, and 19-21 depend upon claim 1, they are also novel, nonobvious, and are in a condition for allowance for at least the same reasons.

Claim 22 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Petrick in view of Vafi et al. (U.S. Pub. No. 20020085670 A1).

Applicant submits that since claim 22 depends from claim 18, that it is also novel, nonobvious, and is in a condition for allowance for at least the same reasons.

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Claims 23-26 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Petrick in view of Karellas et al. (U.S. Pat. No. 6,895,077 B2).

Applicant submits that since claims 23-26 depend from claim 18, they are also novel, nonobvious, and are in a condition for allowance for at least the same reasons.

With respect to claims 25 and 26, the Office Action states that Karellas teaches the limitations of having adjacent pixels on separate halves of a split scan line and having adjacent pixels on a common data line and refers to col. 5, line 32. Applicant, respectfully, traverses. Karellas, like Petrick, fails to teach or suggest a split scan line, especially as claimed. In addition, Karellas simply discloses a pixel array. There is no suggestion anywhere in Karellas that adjacent pixels are located on separate halves or sides of a scan line or a data line. In col. 5, lines 31-34, Karellas discloses that pixels may be grouped or binned selectively to provide varying degrees of resolution. This stated disclosure is unrelated to the layout and coupling of pixels, scan lines, and data lines. The ability to selectively group pixels only implies the use of a configuration that allows for such selection. One can provide a configuration to selectively group pixels without having the novel configuration claimed in claims 25 and 26.

The arrangement of adjacent pixels on separate halves of a split scan line and the arrangement of adjacent pixels on a common data line have associated advantages. The scan line arrangement increases detector read times, which reduces the number of readout channels. The data line arrangement reduces the number of data lines and thus the connection pitch, which increases manufacturing ease. Karellas fails to disclose a layout of scan lines. Karellas also fails to mention any scan lines or the configuration thereof. Also, in Karellas, the data lines disclosed are not coupled to adjacent pixels, see Figure 9C.

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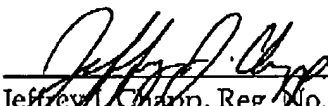
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Thus, claims 25 and 26 are further novel and nonobvious for the above-stated reasons.

In light of the amendments and remarks, Applicant submits that all of the objections and rejections are now overcome. The Applicant has added no new matter to the application by these amendments. The application is now in condition for allowance and expeditious notice thereof is earnestly solicited. Should the Examiner have any questions or comments, the Examiner is respectfully requested to contact the undersigned attorney.

Respectfully submitted,

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Dated: February 10, 2006